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Focus on Details

A curved Lowsley retractor improves manoeuvrability of the prostate during ascending radical retropubic prostatectomy

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INTRODUCTION

Worldwide, radical retropubic prostatectomy is the commonest surgical procedure for treating localized prostate cancer. The technique has evolved continuously over the years, yielding improved continence and potency while reducing considerably the associated complications. Simple surgical 'tricks' have been proposed for crucial steps, e.g. the control of the dorsal venous complex, atraumatic dissection of the neurovascular bundles (NVBs), improved visualization of the urethral stump and tailoring of the vesico-urethral anastomosis [1,2].

If a nerve-sparing procedure is indicated during ascending retropubic prostatectomy, dissection of the erectile nerves usually begins as an early step. The lateral pelvic fascia is incised longitudinally on the ventral or lateral aspects of the prostate, and is dissected from the prostatic capsule towards the dorsal aspect of the prostate. Thus, the NVBs remain intact between the visceral and the parietal layers of the endopelvic fascia. The nerves are dissected distally towards the prostato-urethral junction to avoid damage to the nerves later when transecting the urethra or placing the anastomotic sutures. After dividing the urethra and placing the anastomotic sutures, the rectourethralis muscle is transected from the apex of the prostate. The prostate must now be pulled in a ventral and cephalad direction, to develop the retroprostatic plane and to access the seminal vesicles. Traction on the prostate is usually exerted by pulling on the transected or on a newly inserted Foley catheter through the prostate. However, some additional directing of the prostate is often necessary to obtain adequate exposure. This is commonly done using a blade retractor (e.g. Deaver retractor) or a sponge stick. Nevertheless, optimal exposure might not always be achieved, as traction is mostly undirectional with an upward motion, and depends on a stable and steady position of the retractor. The use of a table-mounted self-retaining retractor system is a possible alternative, but requires frequent repositioning of the blades to adapt to the progress of dissection.

We describe a simple method to improve the manoeuvrability of the prostate, using a curved Lowsley retractor. This instrument was developed for radical perineal prostatectomy [3]. Others have proposed its use for different indications, e.g. for placing a suprapubic cystostomy [4] or for facilitating a DRE and biopsy taken from the base of the prostate [5]. Recently, the use of the Lowsley retractor was described for reducing the tension from the urethrovesical anastomosis during radical laparoscopic prostatectomy [6].

After transecting the urethra and dividing the rectourethralis muscle, a curved Lowsley

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retractor is retrogradely introduced through the prostatic urethra into the bladder, and its branches are opened. The assistant can thus direct the prostate as required. During dissection of the dorsal attachments of the NVBs, the prostate can be pulled towards the contralateral side to facilitate this step (Fig 1a,b). For dissecting the seminal vesicles the prostate is similarly manoeuvred in the contralateral and cephalad direction. Thus, the prostate can be manoeuvred more efficiently and precisely than when using a retractor blade or a sponge stick.

We have used this simple and effective technique of retraction in ascending retropubic radical prostatectomy and in nerve-sparing cystoprostatectomy, and had no specific problems or difficulties in >100 consecutive cases. An important advantage of this technique is that it neither requires an expensive instrument nor specific expertise in its use, and is easily and quickly mastered. Centres that also perform perineal radical prostatectomy will have a Lowsley retractor available, and can benefit from using this versatile retractor also for ascending retropubic radical prostatectomy.

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Abbreviations: **NVB**, neurovascular bundle.

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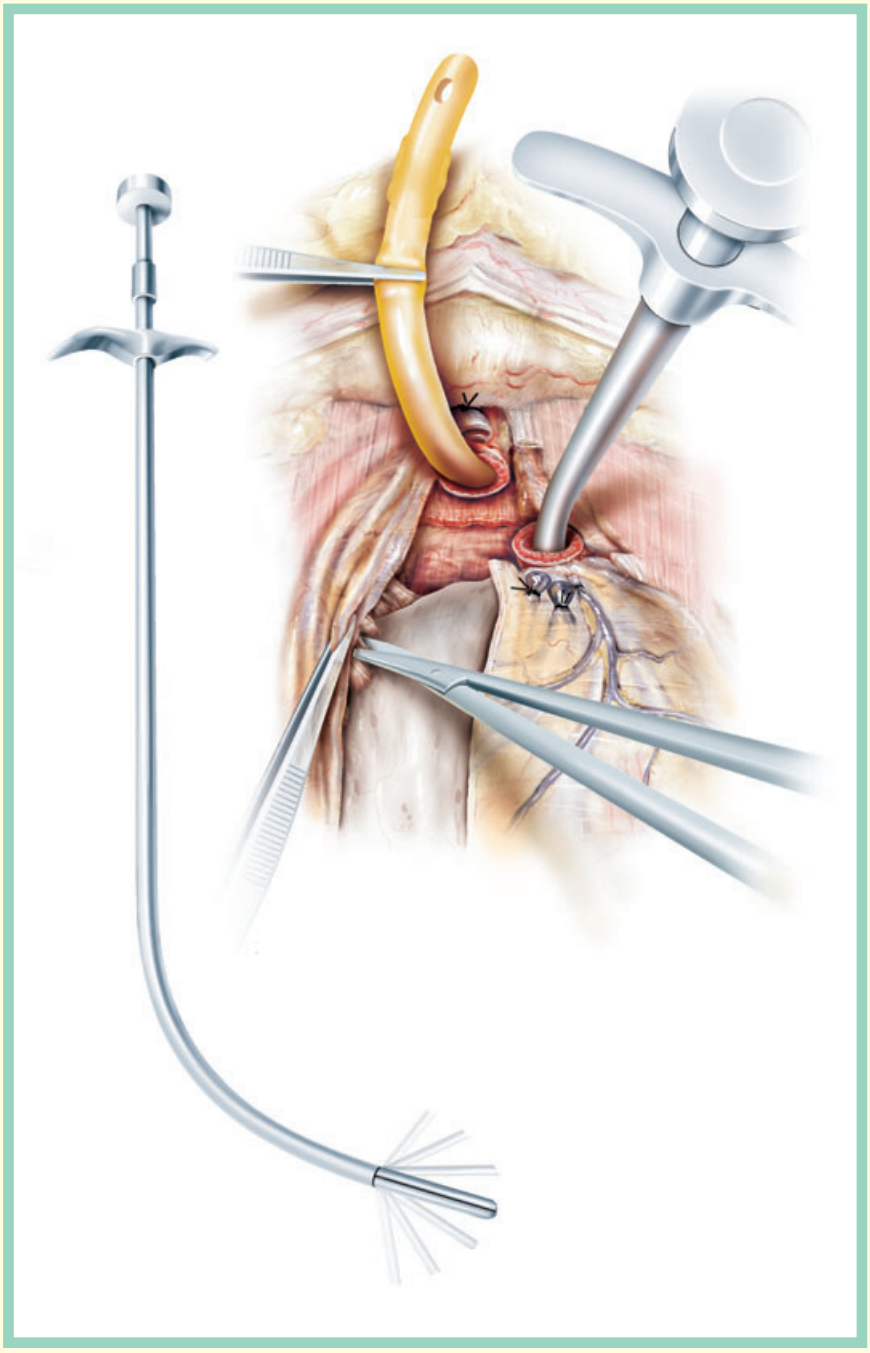
Figure 1

(a,b) The branches of the curved Lowsley retractor have been opened in the bladder. Contralateral and cephalad manoeuvrability of the prostate optimizes exposure and dissection of the NVBs.



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